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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/654,087	09/01/2000	Kazuyuki Fukuda	500.39005X00	5932

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EXAMINER

SEDIGHIAN, REZA

ART UNIT	PAPER NUMBER
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2633

DATE MAILED: 08/02/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/654,087

Applicant(s)

FUKUDA ET AL.

Examiner

M. R. Sedighian

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 31 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 13 6) ☐ Other:

1. This communication is responsive to applicant's 3/31/2004 amendments in the application of Kazuyuki Fukuda et al. for "Optical Transmitter Module" filed 9/1/2000. The amendments have been entered. Claims 1-16 are now pending.
2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1, 5-7, and 11-13 are rejected under 35 U.S.C. 102(b) as being anticipated by Driessen (European Patent Application No: 0 501 571 A1).

Regarding claims 1, 5-7, and 11-13, Driessen teaches an optical transmitter module (1, fig. 3) which has an optical semiconductor element (3, fig. 3), an optical fiber (9, fig. 3) optically coupled to the optical semiconductor element (3, fig. 3), a package case (2, fig. 3) containing the optical semiconductor element (3, fig. 3) and the optical fiber (9, fig. 3) and an optical isolator (17, fig. 3) disposed on a side face of the package case (note that isolator 17 is disposed on a side face of the package case, or housing 2) and arranged to optically couple to a distal end of the optical fiber inside the package case (the optical isolator 17 is coupled, or connected to a fiber 9 that is extended to the inside of the package module 1) for optical coupling with another optical fiber provided outside the package case (note that optical isolator 17 is also coupled at the other end to a fiber 20 that is extended to the output of module 22), comprising: a substrate member (5, 11, fig. 3) with one end of the optical fiber on the light incident side fixed thereon to be optically coupled to the optical semiconductor element (col. 3, lines 51-58); a thermoelectric cooler (4, 6,

fig. 3) with the substrate member joined to a top surface thereof (col. 3, lines 41-45); and a pipe-like support member (col. 4, lines 51-57 and 22, fig. 3) projecting from the side face of said package case (2, fig. 3) for fixing the optical isolator (17, fig. 3), wherein the optical isolator is joined on its whole perimeter to the pipe-like support member (note that optical isolator 17 is joined on its perimeter by the pipe-like module 22) at a distal end thereof so as to be fixed to the pipe-like support member (the pipe-like support member 22 is at the distal end of package housing 2). As to claims 7 and 11-13, Driessen further teaches the optical isolator (17, fig. 3) and lenses (18, 19, fig. 3) provide a substantially collimated and converged light beam (col. 4, lines 43-50, col. 5, lines 7-11).

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 2 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Driessen (European Patent Application No: 0 501 571 A1) in view of Timmermann (US Patent No: 4,137,060).

Regarding claims 2 and 14, Driessen differs from the claimed invention in that Driessen does not disclose the end of optical fiber is spherical or conical in shape. Timmermann teaches an optical fiber (1, fig. 1) with spherical end (col. 2, lines 29-31 and 4, fig. 1). Therefore, it would have been obvious to an artisan at the time of invention to incorporate an optical fiber with a

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spherical end, as it is taught by Timmermann, for the optical fiber in the laser module of Driessen in order to increase the light coupling efficiency.

6. Claim 3 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Driessen (European Patent Application No: 0 501 571 A1) in view of Shibukawa et al. (US Patent No: 5,049,429), or in view of Lemaire et al. (US patent No: 5,478,371).

Regarding claims 3 and 15, Driessen differs from the claimed invention in that Driessen does not disclose the length of said optical fiber is 15 to 25 mm. Shibukawa teaches an optical fiber of length 15 mm (col. 6, lines 60-62). Lemaire teaches an optical fiber of length 25 mm (col. 4, line 66). Therefore, it would have been obvious to an artisan at the time of invention to incorporate an optical fiber of length 15 to 25 mm, as it is taught by Shibukawa or Lemaire, for the optical fiber in the transmitter module of Driessen in order to provide an optical fiber of sufficient length. Applicant's attention is directed that when the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges, use of preferred materials, by routine experimentation. In re Swain et al., 33 CCPA (Patents) 1250, 156 F. 2d 239, 70 USPQ 412; Minnesota Mining and Mfg. Co. V. Coe, 69 App. D.C. 217, 99 F. 2d 986, 38 USPQ 213; Allen et al. V. Coe, 77 App. D.C. 324, 135 F.2d 11, 57 USPQ 136. In re Aller; 105 USPQ 233 (CCPA 1955).

7. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Driessen (European Patent Application No: 0 501 571 A1) in view of Eales et al. (US patent No: 4,615,031).

Regarding claim 4, Driessen differs from the claimed invention in that Driessen does not disclose optical isolator and the support member are fixed to each other through laser welding or brazing. Eales teaches a method of laser welding (col. 1, lines 52-54) or brazing (col. 3, lines 12-14) for positioning optical elements. Therefore, it would have been obvious to an artisan at the time of invention to incorporate a method of laser welding, or brazing, as it is taught by Eales, to fix or position the optical isolator and the support member, in the transmitting module of Driessen, in order to provide a highly precise and tight connection.

8. Claims 8-10 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Driessen (European Patent Application No: 0 501 571 A1) in view of Tatsuta (US patent No: 6,108,359).

Regarding claims 8-10 and 16, the optical transmission module of Driessen differs from the claimed invention in that Driessen do not disclose an optical fiber in a bent state. Tatsuta discloses a laser diode module (fig. 1), wherein an optical fiber (6, fig. 1) can be in a bent state (col. 3, lines 8-22). Therefore, it would have been obvious to an artisan at the time of invention that the optical fiber such as the one used in the laser module of Driessen can be employed in a bent state or it can become into a bent state, as it is taught by Tatsuta, to obtain a better alignment with the laser.

9. Applicant's arguments with respect to claims 1, 5, 6, and 13 have been considered but are moot in view of the new ground(s) of rejection.

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10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to M. R. Sedighian whose telephone number is (703) 308-9063.

The examiner can normally be reached on M-F (from 9 AM to 5 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Chan can be reached on (703) 305-4729. The fax phone numbers for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-4700.



**M. R. SEDIGHIAN
PRIMARY EXAMINER**